

TWISTER

quattro-X

HIGH PERFORMANCE QUAD

INSTRUCTION MANUAL



Vital Safety Information

CAUTION!

This flying model is not a toy. It can cause injury to persons/animals and/or property if not used correctly. It is unsuitable for persons under the age of 14. You should take care and observe the principles of safety when flying this model. In the UK, we recommend you observe the British Model Flying Association (BMFA) safety code at all times, which can be found at the following address: <http://www.bfma.org>

DANGER — Do not wear loose clothing or ties!

DANGER — Keep well clear of rotating propellers!

DANGER — Never operate near children or animals!

About the Flying Area Required

If you are a newcomer to R/C flight and have never flown a radio control model before; it is vital you seek advice from an experienced model pilot on where and how to fly.

Only fly in large open spaces that are approved for R/C model flying and that are away from people, animals, buildings, power lines, water or trees.

Only fly in bright conditions where wind speed does not exceed 15mph.

DANGER — Do not attempt to fly this model indoors.

Training, Crashing and Spare Parts

This model has been designed to be strong and has many built-in safety systems. However, they are not invulnerable and most people will break parts during their flying career. This is quite normal. All parts are available as spares from your supplier. Crash damage is not covered by warranty.

Guarantee/Warranty

J. Perkins Distribution Ltd. guarantee this product to be free of manufacturing and assembly defects for a period of one year from time of purchase. This does not affect your statutory rights. This warranty is not valid for any damage or subsequent damage arising as a result of a crash, misuse, modification or for damage or consequential damage arising as a result of failure to observe the procedures outlined in this manual. Operation of this model is carried out entirely at the risk of the operator. Please note that, whilst every effort is made to ensure the accuracy of instructions and material included with this product, mistakes can occur and neither J. Perkins Distribution Ltd nor its distributors will be held liable for any loss or damage arising from the use of this model or for any loss or damage arising from omissions or inaccuracies in the associated instructions or materials included with this product.

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gojp.co/quattro-x

Vital Safety Information

New to R/C Models?

The Twister Quattro-X is not a toy and is capable of high performance flight. It requires preparation before taking to the air and it will require careful set-up in order to function correctly. Rotating propellers can cause injury and the utmost care must be taken when flying any model. A high performance Li-Po battery and charger are included.

If this is not what you were expecting, we advise you not to buy this model.

If you are new to flying R/C multi-rotors, or even if you are an experienced modeller, we recommend you have a fellow R/C modeller help you with the first flight. Some items you will need to complete on your first preflight are:

1. Check that the model is assembled correctly and ready for flight.
2. Check that the propellers are mounted in the correct location and that the propeller nuts are secure.
3. Ensure that the transmitter battery power is good and fresh batteries are fitted.
4. Ensure the Li-Po flight battery is fully charged and secure in its bay in the rear of the model.
5. Check that the electronics are operating correctly
6. Wait for a calm day with light winds for your first flights.
7. If you are new to R/C flying, we recommend having an accomplished flyer with you.

GENERAL SAFETY

Please be aware that rotating propellers can inflict painful and possibly serious injury or damage to people, animals or objects should the blades strike someone or something.

We recommend people keep fingers well clear of the propeller when operating this model and that you read this manual carefully before operating your Quattro-X.

Radio controlled models can reach high speeds and cover significant distances rapidly if control is lost. It must therefore be used responsibly and with great care generally.

This model operates on the 2.4GHz radio band using the latest 2.4GHz technology, thereby providing probably the best interference rejection of any R/C system available today. This technology eliminates frequency worries with multiple radio operation as the radio encodes its own unique frequency data at startup.

In the UK, we recommend you observe the guidelines of the British Model Flying Association which can be found at the following web address: <http://www.bmfa.org>

Li-Po Battery Safety Information

Before Charging Li-Po Batteries

- Before charging your battery, check for any physical damage. Check if the battery has expanded or swollen in size, or if the battery cell has been punctured. If any of the above is true: **DO NOT CHARGE THE BATTERY!**

Charging Li-Po Batteries

- Only use the supplied charger or a charger that is designed to charge Lithium Polymer (Li-Po) batteries. Never use a Ni-Cd, Ni-MH or other charger as this is very dangerous.
- Never attempt to charge at a rate faster than that recommended.
- Never charge Li-Po batteries unattended. Always stay with your battery while charging in case of overheating or fire.
- Charge on a safe surface or container. Charge only on non-flammable surfaces, such as a concrete floor preferably outdoors, or in a Pyrex cooking dish with the battery placed on a bed of sand, or in a fireplace or in a proprietary charging bag or sack. Never charge inside a car!
- Remove the battery from the charger if the battery gets too hot. If the battery becomes hot to the touch during charging, disconnect it immediately.
- Extinguish fires with sand. If something goes wrong and your battery catches fire, always have sand from a fire bucket at hand to put out the flames. Do NOT use water!

Using Li-Po Batteries

- Do not modify/change any part of the battery or connector. Do not remove its protective covering. Removal or modification may damage the battery and will invalidate any warranty claim.
- Do not place Li-Po batteries near fire or anything with high temperatures.
- Do not charge batteries while you are driving and do not store batteries in any type of motor vehicle.
- Do not let the battery get wet or become submerged in any type of liquid.
- Do not carry loose batteries in your pocket or bag as they could short-circuit against other items.
- If you should get electrolyte from the cells on your skin, wash thoroughly with soap and water. If in your eyes, rinse thoroughly with water. Seek medical assistance.

EU regulations

J Perkins Distribution Ltd declares that this remote control system included with this model is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC on Radio equipment and Telecommunications Terminal Equipment. A copy of the declaration(s) of conformity can be obtained from J Perkins Distribution Ltd, Ashford Road, Lenham, Kent. UK ME17 2DL. This system complies with the EU directive on Waste Electrical and Electronic Equipment. Do not dispose of this product in household waste. At the end of the product's life, dispose of it at a designated collection point for the recycling of waste electrical and electronic equipment. Please contact your supplier for any advice required on disposal.



MADE IN CHINA

Introduction

Thank you for purchasing the Quattro-X quadcopter. This exciting GPS equipped, gyro assisted quad offers exceptional stability, yet still has a performance to excite the seasoned multi-rotor flyer. The Quattro-X has many revolutionary features as standard, such as stable GPS Mode, Orientation Mode, Return Home and Altitude Hold mode.

This means that you can choose between an easy to fly model that's suitable for flyers with only very little radio control experience or fly the Quattro-X without the GPS mode enabled for a more dynamic flight performance. Of course, with its six-axis gyro, it is a super-stable platform to mount a GoPro® or similar action camera to capture breathtaking video footage.

To ensure that you operate this model safely, you must read and understand this instruction manual to familiarise yourself with the model's features and functions. This model is not a toy.

There are guidelines on flying multi-rotor SUA, 'Small Unmanned Aircraft' and SUSA, 'Small Unmanned Surveillance Aircraft'. SUSA includes camera-equipped models such as the Quattro-X fitted with an action camera.

To comply with the recently published CAA Information Notice (dated 24th April 2014) you must observe the following:

30m Takeoff and Landing Rule for SUSAs

67(3)&(4) During take-off or landing, a SUSA must not be flown within 30 metres of any person except that it can be flown within 30 metres of the person in charge of the SUSA or another person under the control of the SUSA.

Maximum Range of 500m for SUAs

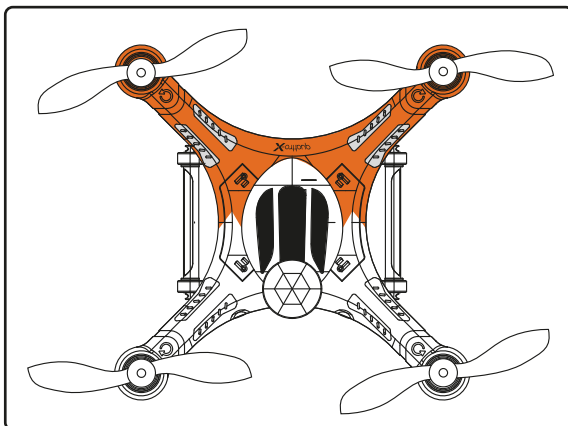
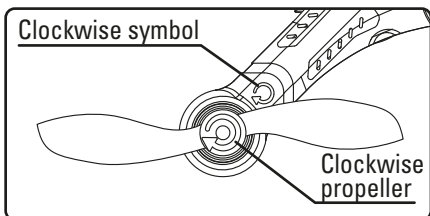
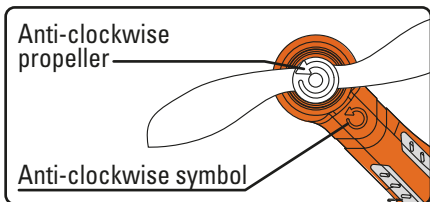
4.1.1 Unless an exemption has been given by the CAA, SUA may not be operated beyond the direct, unaided VLOS (Visual Line Of Sight) of the operator. The standard CAA permission for aerial work limits the SUA/SUSA VLOS to a height not exceeding 400 feet above ground level and a distance not beyond the visual range of the operator, or a maximum distance of 500 metres.

For further information on this, please visit: <http://www.caa.co.uk/>

Assembly Instructions

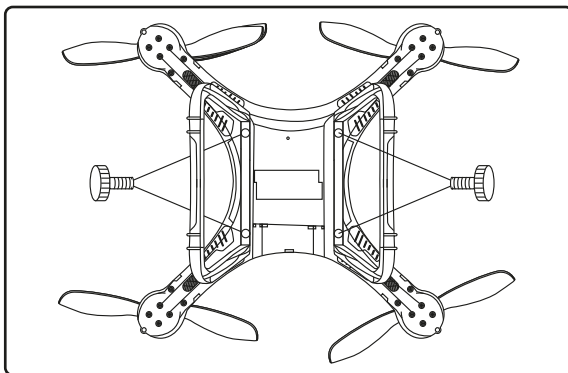
1. Installing the Propellers

- a. Locate the four propellers. Note that the propellers are 'handed' - there are two right-hand rotation propellers and two left-hand rotation. Each propeller is marked with its rotation and must be installed with this marking upwards.
- b. Remove the propeller nut from one of the motors using the hexagon wrench supplied.
IMPORTANT: The silver propeller nuts are a normal right-hand thread and untighten anti-clockwise and the black propeller nuts have a left-hand thread and untighten clockwise.
- c. Fit each of the four propellers ensuring the direction of rotation on the propeller matches the direction of rotation symbol next to each motor. Re-fit each propeller nut and tighten sufficiently. Remember to tighten the silver nuts clockwise and the black nuts anti-clockwise.



2. Installing the Landing Gear and Antenna

- a. Locate the landing gear struts and retaining thumb screws. Install the landing gear struts using two thumb screws on each.
- b. There is a small hole in the corresponding strut for the antenna wire to pass through. Ensure the antenna wire is not trapped under the landing gear strut. Retain the antenna wire in the groove in the landing gear strut with a small length of clear tape.



3. Installing an Action Camera

- a. Locate the rubber isolated action camera mount. Pull the rubber grommets out of the camera half of the mount so that you can gain access to the mounting screw holes. Screw the mounting plate onto the underside of the Quattro-X using the Allen driver and cap head screws supplied. Re-fit the camera mount by gently easing the rubber grommets back through the mounting plate.
- b. Remove the thumbscrew to release the camera mounting frame. Pop the frame open, drop in an action camera and close up it up. Install on the underside of the Quattro-X and re-fit the thumbscrew. Alternatively, use the hard case supplied with your action camera to mount your device.

IMPORTANT: Consult local laws before installing and operating any video recording device in the Quattro-X. Remember that commercial photography (defined as anything that results in you receiving valuable consideration for your work) requires registration and a permit to fly from the CAA.



Fit the mount using the supplied screws.



Install the rubber isolated camera mount.



Remove the thumbscrew to release the camera frame.



Snap the frame closed around the camera.



Re-fit the frame to the rubber isolated mount.



Alternatively, mount an action camera in its own hard case.

- C. VERY IMPORTANT:** The GoPro® and many other action cameras use 2.4GHz wi-fi for streaming video. This can interfere with the radio equipment and the GPS sensor. It is imperative that before operating the Quattro-X, the camera's wi-fi is disabled. Failure to do this could result in loss of control which can lead to damage to property or personal injury.

Only recording video to the camera's on-board mini SD card is recommended.

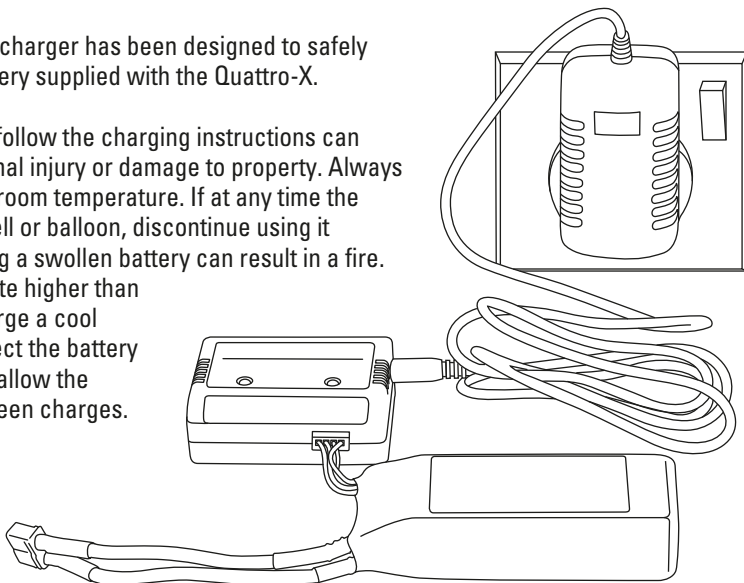
Preparation for Flight

1. Charging the Battery

a. The battery supplied with the Quattro-X is a high capacity 3S (11.1V) Li-Po. Only use the supplied charger to charge the battery or a suitable Li-Po balance charger. Read the safety instructions at the beginning of this manual so you understand how to handle Li-Po batteries before charging.

b. The included battery charger has been designed to safely charge the Li-Po battery supplied with the Quattro-X.

IMPORTANT Failure to follow the charging instructions can result in a fire, personal injury or damage to property. Always store your battery at room temperature. If at any time the battery begins to swell or balloon, discontinue using it immediately. Charging a swollen battery can result in a fire. Do not charge at a rate higher than 1C and only ever charge a cool battery. Always inspect the battery before charging and allow the charger to cool between charges.



c. Always remove the Li-Po battery from the model before charging. Connect the Charger to the AC Adaptor. Plug the AC Adaptor into a mains power socket and switch it on. The GREEN Charger Indicator LED on the Charger should illuminate.

d. Plug the small white connector on your Li-Po battery into the charger as shown taking care to ensure that it is connected correctly. The plug is shaped to fit only one way. When charging, the RED Power Indicator LED should illuminate.

e. When the battery is fully charged (it may become warm to the touch) the RED LED should go out. Disconnect the battery from the charger.

DO NOT LEAVE THE BATTERY CHARGING UNATTENDED!

IF THE BATTERY BECOMES EXCESSIVELY HOT DURING CHARGING, DISCONNECT BATTERY AND CHARGER IMMEDIATELY!

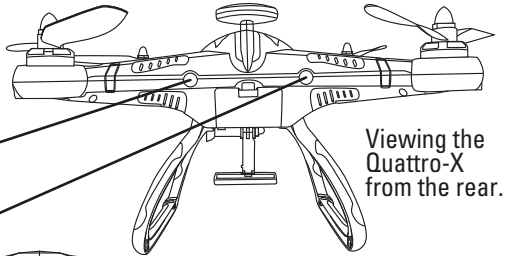
f. Unplug the charger from the mains power socket. Your Li-Po battery is ready for use.

Indicator Lights and Status

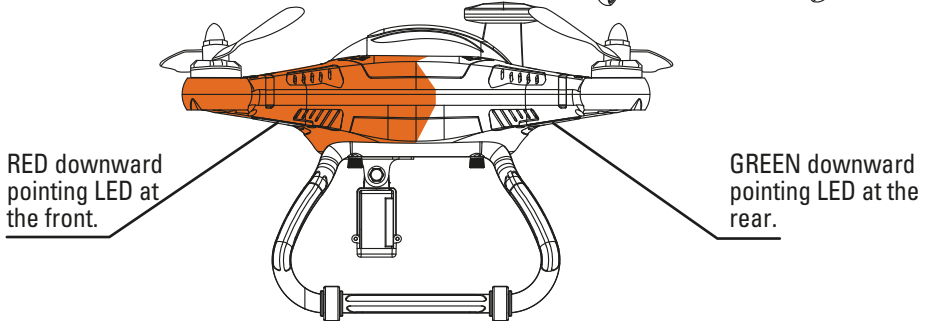
1. Understanding the LED Indicators

YELLOW/RED LED light is used for the main board calibration, plus motor lock/unlock indication.

GREEN LED light is used for GPS signal indication.



Viewing the Quattro-X from the rear.



RED downward pointing LED at the front.

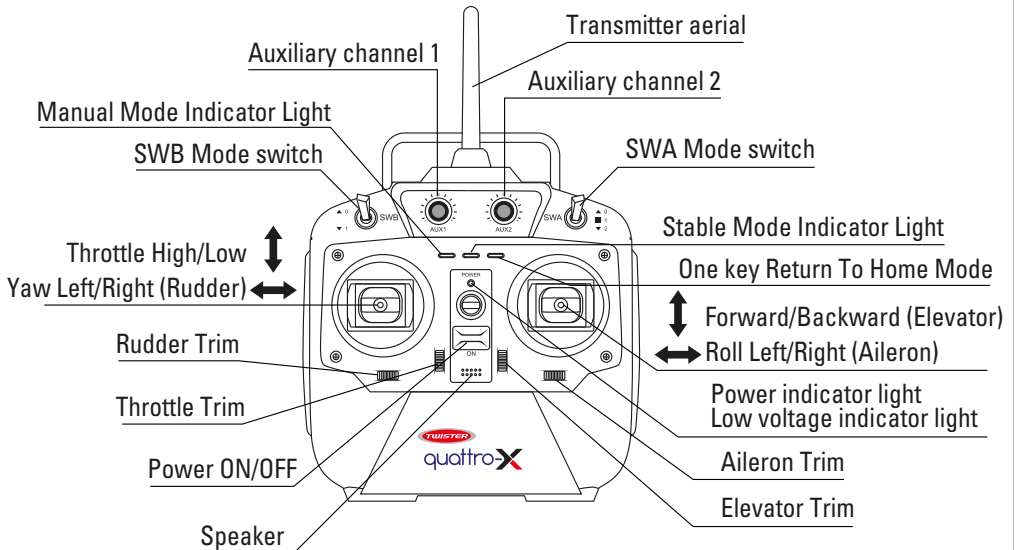
GREEN downward pointing LED at the rear.

2. LED Indicator Status

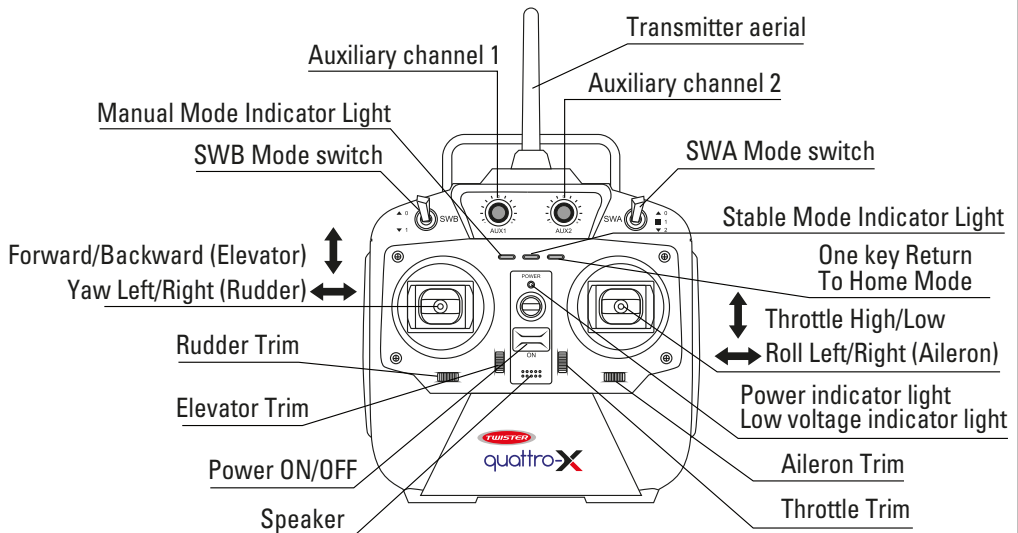
- a. The downward pointing LEDs on the front of the model illuminate RED and remain steady when the motors start. If the flight battery falls below its safe voltage, the LEDs flash and an alarm sounds. If this occurs, you should land immediately.
- b. The downward pointing LEDs on the rear of the model illuminate GREEN and remain steady when the motors start. If the flight battery falls below its safe voltage, the LEDs flash and an alarm sounds. If this occurs, you should land immediately.
- c. The YELLOW/RED LED on the rear of the model flashes alternate RED then YELLOW while the main control board calibrates. The RED LED slowly flashes when the motor function is locked and safe and the RED LED remains steady when the motors are unlocked and armed. When you unlock the motors, one or more motors may spin slowly if the ground is not level. This is perfectly normal. The motors return to a locked state if the throttle is not operated within 5 seconds after the motors are armed.
- d. The GREEN LED on the rear of the model indicates GPS status. The GREEN LED flashes when less than 6 satellites are received by the GPS system. NOTE: For the Stable Model and Return Home Mode to function correctly, the GPS system must receive information from a minimum of 6 satellites. When the GPS system is receiving data from 6 or more satellites, the GREEN indicator will illuminate and remain steady. **Note:** The accuracy of the hover and landing point is dependent on the strength of the GPS signal - even if the LED is GREEN - and can also be affected by the wind and other weather conditions.

Transmitter Functions and Settings

Mode 2 (Throttle Left) Transmitter Control Layout



Mode 1 (Throttle Right) Transmitter Control Layout



Basic Operation

1. Binding the Quattro-X to the Transmitter

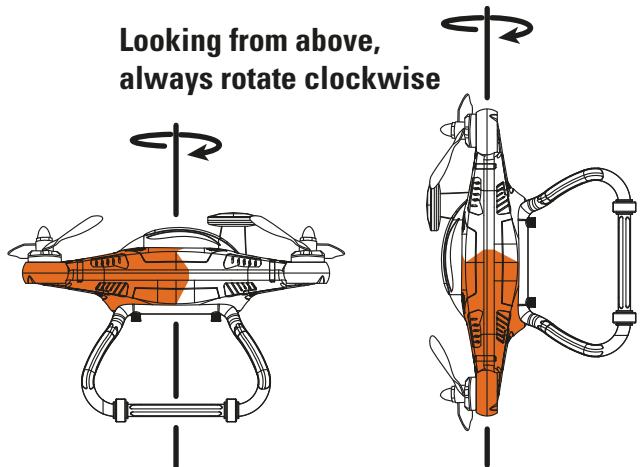
- a. With the transmitter turned OFF, install a charged Li-Po battery into the battery bay at the rear of the Quattro-X. Connect the battery using the T-connectors. The RED and GREEN LED indicator lights will rapidly flash alternately. During this initialisation period, do not move the Quattro-X. When the RED and GREEN LED indicators flash slowly, close the battery bay door.
- b. Ensure that the throttle stick is in its lowest position and switches SWB and SWA are in their '0' positions. Now turn on the transmitter. The transmitter emits a number of 'beeps' as it powers up.

IMPORTANT:

If you are flying with friends with more than one Quattro-X, you must make sure that each Quattro-X is turned on and bound to its transmitter before the next Quattro-X is turned on. Do not attempt to bind more than one Quattro-X at the same time.

2. Calibration

- a. Before the first flight the Quattro-X must be calibrated. This is achieved by connecting a flight battery and binding the model to the transmitter as above.
- b. Move Switch SWA from position 0 to 2 and back to 0 until the Yellow LED flashes quickly (this may take 8 to 20 flicks of the switch). Keeping the model horizontal, rotate it clockwise 2 or more times until the YELLOW LED flashes slowly.
- c. Now point the Quattro-X down towards the ground and rotate it clockwise about its roll axis 2 or more times until the RED and GREEN LEDs flash together to signify that this has been completed correctly.
- d. Now place the model on level ground. Disconnect the flight battery and turn off the transmitter. Calibration is now complete. You may re-bind and fly.
- e. Should the Quattro-X ever become unstable or unsteady in flight, it may need to be re-calibrated by repeating the above procedure. If you fly at a location that is more than 50km from the point you calibrated the Quattro-X, you will need to repeat the calibration procedure.

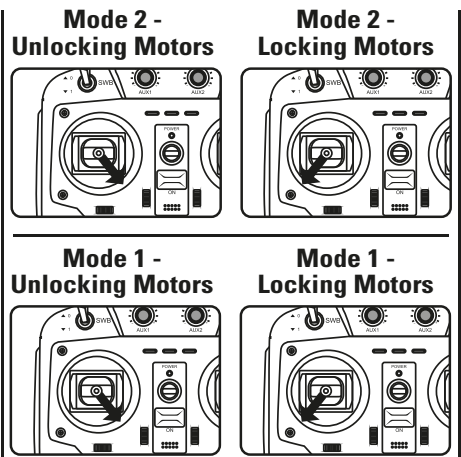


3. Acquiring GPS Signals

- a. In order for the Quattro-X to acquire a GPS signal, the model must have a clear view of the sky. Objects such as tall buildings and dense trees will make acquiring a GPS signal difficult or impossible. Without a GPS signal, GPS Mode, Height Mode and Return Home Modes will not be available. Do not attempt to fly in one of these GPS Modes when the GPS signal is known to be poor or intermittent. **WARNING:** Never attempt to fly in one of these modes indoors.
- b. With the Quattro-X powered up and the transmitter switched ON, allow the Quattro to receive GPS signals by positioning the model on the ground with a clear view of the sky. GPS signals have been acquired with the GREEN LED on the rear of the Quattro-X stops flashing and illuminates with a steady light. Typically, this can take around 2 minutes. **Note:** The accuracy of the hover and landing point is dependent on the strength of the GPS signal - even if the LED is GREEN - and can also be affected by the wind and other weather conditions.

4. Unlocking and Locking the Motors

- a. As a safety feature, the motors need to be 'Unlocked' prior to operation. Until the motors are unlocked, the throttle stick will not have any effect. Note that you can only unlock the motors when both switches are in their '0' positions. It is good practice to leave the motors locked until the Quattro-X has bound to the transmitter, the GPS signals have been acquired and you are ready to fly. Note after you have unlocked the Quattro-X some motors might turn slowly if it's on uneven ground. Don't be put off, the slow running of the motors will help the Quattro-X come to a level hover quicker when you take off from uneven ground. **WARNING:** Never unlock the Quattro-X while you are holding it in the air, as some motors will turn slowly thinking it's on uneven ground.
- b. With a Mode 2 transmitter, to unlock the motors keep the throttle stick in its lowest position and move it to the bottom right of the transmitter. For a Mode 1 transmitter, keep the throttle at its lowest position and pull back the rudder/elevator joystick to the bottom right of the transmitter and hold it in this position. The motors are unlocked and armed when the flashing RED LED illuminates with a steady light and the rear motors spin slowly. The LED may take a few seconds to illuminate. The motors return to a locked state if the throttle is not moved within a few seconds after unlocking.
- c. With a Mode 2 transmitter, to lock the motors, reduce the throttle stick to its lowest position and move it to the bottom left of the transmitter. For a Mode 1 transmitter, keep the throttle at its lowest position and pull back the rudder/elevator joystick to the bottom left of the transmitter. The motors are locked when the steady RED LED begins flashing and the motors stop spinning. It may take a few seconds for the LED to begin flashing.

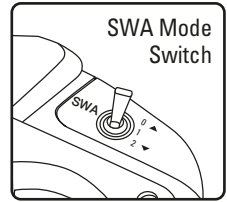
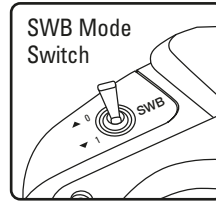


Setting the Flight Modes

1. Selecting Flight Modes with the SWB and SWA Switches

- a. The Quattro-X can be flown in many different flight modes - each of which are described in detail below. Each flight mode is selected using the two switches on the transmitter.

Important: All flights should commence with both switches in their '0' position (Take-Off/Manual Mode).



FLIGHT MODE	SWB Position	SWA Position
Take-Off/Manual	0	0
GPS	0	1
Orientation	1	1
Altitude Hold	1	2
Return Home	0	2

Flight Modes Explained

1. Take-Off/Manual Flight Mode

- a. With Switch SWB in its '0' position & Switch SWA in its '0' position, the Quattro-X is in its Take-Off (or Manual) Flight Mode. In this mode, the Quattro-X is controlled without any GPS stability.
- b. Ensure the throttle is in its low position and both SWB and SWA are in their '0' positions. Insert a charged battery, plug it in and allow the Quattro-X to initialise. Close the battery hatch and switch on the transmitter. The motors can now be unlocked. When the RED LED stops flashing and remains steady, the model is ready for flight.
- c. In Take-Off/Manual Flight Mode, the Quattro-X can be flown forwards and backwards, bank left and right and rotate (yaw) to the left and right. It can ascend and descent using the throttle stick.

2. GPS Mode

- a. Only enter GPS Mode once the Quattro-X is airborne in Take-Off/Manual Flight Mode. Do not enable GPS Mode until the Quattro-X is in flight.
- b. Once the Quattro is hovering at the desired height, enter GPS Mode by keeping SWB in its '0' position and selecting position '1' on Switch SWA. When the Quattro-X is in a stable hover, push the throttle stick to its mid-position. The transmitter will give a beep, beep, beep... sound to confirm the throttle stick is centred. The model will now remain in this position without control inputs from the pilot. Allow sufficient space to fly in GPS Mode as the model's position can still be affected by the wind and other weather conditions. **IMPORTANT:** In GPS Mode, the GPS signal indicator LED (the GREEN LED on the rear of the Quattro-X) must remain illuminated with a steady light. If the LED begins to flash, the GPS signal has been lost and you should return to Take-Off/Manual Mode by moving switch SWA to its '0' position.

- c. When in GPS Mode, the Quattro-X is much more stable and it will try to stay in the same position. You should move the throttle stick to its mid-position (a beep-beep-beep... sound will identify this) to maintain both height and position. **Note:** Even if you have a solid GREEN LED, the accuracy of the hover point is dependent on the strength of the GPS signal and can be affected by the wind and other weather conditions.

3. Orientation Mode

- a. Only enter Orientation Mode once the Quattro-X is airborne in Take-Off/Manual Mode. One of the most tricky aspects of flying a Quadcopter is orientation - being able to see which way round the model is facing (which is the front and the back of the model) when in flight.
- b. With Orientation Mode selected, the orientation of the model is not important - pushing forward on the elevator stick will make the Quattro-X move forward, relative to the direction the front of the Quattro-X is pointing when Orientation Mode is selected. Forward is now forward, no matter which way the model is pointing. Additionally, moving the aileron stick to the left will make the model bank left in relation to the position where the Orientation Mode was selected & not in relation to the model.
- c. Ensure that the model is pointing away from you when selecting Orientation Mode. Move the SWB Switch to position '1' then move SWA Switch to position '1' to select Orientation Mode. Now a forward stick command will always result in the Quattro-X moving in the direction the front of the model was pointing when Orientation Mode was selected. **IMPORTANT:** Ensure the Quattro-X is pointing away from you when selecting Orientation Mode as it uses this point for reference.

4. Altitude Hold Mode

- a. Only enter Altitude Hold Mode once the Quattro-X is airborne in Take-Off/Manual Flight Mode. Altitude Hold Mode maintains the same altitude. To enter this mode, take off and hover at the desired height using Take-Off/Manual Mode. Select Altitude Hold Mode by flicking Switch SWB to its '1' position and Switch SWA to its '2' position. Now move the throttle to its mid-position. The transmitter will indicate the throttle stick is in this position by emitting a beep-beep-beep... sound.
- b. When in Altitude Hold Mode, the Quattro-X will fly at the same height. Allow sufficient space to fly in this mode as the model's position can still be affected by the wind and other weather conditions.

5. Return Home Mode

- a. Only enter the Return Home Mode when the Quattro-X is in the hover, not in forward flight. To Return Home, flick the SWB switch to its '0' position and the SWA switch to its '2' position. If the model's altitude is greater than 15 metres, it will return to its starting point immediately. If it is less than 15 metres, it will climb first, then return to its starting point. The Home position is the point from which the Quattro-X took off. The accuracy of the landing depends on the GPS signal strength.
- b. Before entering Return Home mode, ensure you have a GPS signal and you have a solid GREEN LED on the back of the model. If the LED is flashing, it means that you have lost the GPS signal and you must not attempt to enter the Return Home mode until you have acquired a strong GPS signal.
Note: To cancel the Return Home function, simply move SWA to its '1' or '0' positions.

- c. Once the Quattro-X has returned to home using the Return Home mode, the model will automatically lock the motors for safety. If the ground is not level, one or more motors may continue to run slowly before locking. Before flying again, return switch SWB and switch SWA to their '0' positions and unlock the motors using the procedure identified in Step 4 Basic Operation.
- d. In extreme cases, if the transmitter is switched off, the Quattro-X will automatically enter the Return Home mode and will land by itself if it has a strong GPS signal. When the Quattro-X is in this automatic Return Home mode, do not attempt to interrupt it by turning the transmitter back on to regain control until after the model has landed.
Note: The accuracy of the landing point is dependent on the strength of the GPS signal and can be affected by the wind and other weather conditions.

Additional Safety Features

1. Flight Battery: Low Power - Alarm

- a. When the flight battery falls below a pre-set voltage, there is an audible alarm to warn you of this and you must land immediately. The Red and Green LEDs under the Quattro-X also flash to indicate that the power is low in the flight battery and you should land.

2. Flight Battery: Very Low Power - Auto Land

- a. When the flight battery voltage falls below a critical level, the Quattro-X enters an automatic Safe Land sequence. If you do not act on the Low Power warnings above, the Quattro-X will attempt to land safely while sufficient power remains in the Flight Battery. As there may not be enough power to return the Quattro-X to home, it will simply attempt to land safely where it is. As this is carried out as an emergency procedure, the landing will not be as smooth as the Return Home landing sequence. Once the landing has been completed, you should lock the motors moving the left-hand joystick to the bottom left of transmitter and holding it there until the RED LED flashes.



Co-Pilot's Briefing Sheet

Until you are familiar with the switch layout on the transmitter and you can select the various flight modes at will and without delay, it makes sense to have a friend act as a co-pilot or wingman to call out the required switch positions should you need them in a hurry.

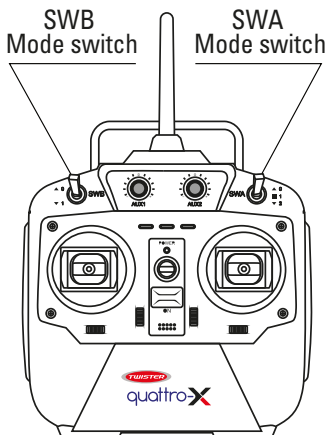
Please cut-off the instruction sheet overleaf and keep it in your transmitter case or flight box so it is always available when you are flying.

Troubleshooting

Quattro-X flies in a circle in GPS Mode.	<ol style="list-style-type: none"> 1. Poor GPS signal - make sure you are flying away from trees with a clear view of the sky. 2. Try to fly in Take-Off/Manual Flight Mode for 3 to 5 minutes for the Quattro-X to find a GPS signal.
Motors do not spin.	<ol style="list-style-type: none"> 1. Check that SWB and SWA switches are in their '0' positions before unlocking the motors. 2. The flight battery needs charging. 3. You have not unlocked the motors by moving the left stick to its bottom right position.
The motors are spinning but Quattro-X will not take-off.	<ol style="list-style-type: none"> 1. Check the propellers have not been installed upside down. 2. Ensure that the propellers are fitted correctly and the rotation of each propeller matches the rotation marked on each arm.
The Quattro-X does not return home accurately.	<ol style="list-style-type: none"> 1. This is due to a poor GPS signal. Try changing to a more suitable flying area with large open spaces and a clear view of the sky.
The Quattro-X does not hover correctly.	<ol style="list-style-type: none"> 1. The Quattro-X may need to be re-calibrated. Follow the calibration guide on page 10 - Basic Operation.



Handy Switch Guide



Remember that Switch SWB is on the Left when looking at the transmitter and Switch SWA is on the Right.

If you lose control or orientation of the Quattro-X in flight, simply enter Return Home mode.

Return Home is: Switch SWB in position 0
Switch SWA in position 2



FLIGHT MODE	SWB Position	SWA Position
Take-Off/Manual	0	0
GPS	0	1
Orientation	1	1
Altitude Hold	1	2
Return Home	0	2